



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/776,344	02/12/2004	Jianfu Zhao	4620-005	1754

22429 7590 08/12/2005

LOWE HAUPTMAN GILMAN AND BERNER, LLP
1700 DIAGONAL ROAD
SUITE 300 /310
ALEXANDRIA, VA 22314

EXAMINER

BARRY, CHESTER T

ART UNIT PAPER NUMBER

1724

DATE MAILED: 08/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/776,334 ³⁴⁴

Applicant(s)

ZHAO

Examiner

Chester T. Barry

Art Unit

1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 September 2004.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-7 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Art Unit: 1724

Claim 1 is rejected under 35 USC Sec. 102(b) as anticipated by USP 5549818 to McGrew. McGrew shows bioreactor having an aeration device 12 above aeration zone 23 and settle zone within barrier (sedimentation cone) 7. Gap between the aeration zones and settle zone is found below apex of cone 7.

Claim 2 is rejected under 35 USC Sec. 112(2nd paragraph) for failing to particularly point out and distinctly claim the invention. It is unclear what "inlet pipe" applicant refers to in claim 2. An aeration pipe inlet? A waste inlet pipe? There is no antecedent basis for "the sleeve 11" in claim 1. There is no antecedent basis for "the sleeve 12" in claim 1. The meaning of the term "diffluent implement" cannot be ascertained. Claims 4 – 7 are rejected for the reasons given with respect to claim 2. Claims 2, 4 – 7 could not be meaningfully searched given the deficiencies noted above. Upon rectification of this deficiency, a search and non-final action will be prepared.

Claim 3 is rejected under 35 USC Sec. 102(b) as anticipated by USP 5785854 to McKinney. McKinney shows bioreactor having an aeration device 36 above aeration zone 20 and settle zone 22 within barrier (sedimentation cone) 18. Gap between the aeration zones and settle zone is found below apex of cone 18, near where ref. num. 26 is shown in figure 2. An uplift zone, near where aeration device 36 is connected to aeration zone, is shown by arrow 100. A diversion area located beneath the sedimentation cone diverts the flow of the rising water, as shown by curved arrows underneath the cone (front drawing, fig 5). A sludge concentration zone is located at

344
Application/Control Number: 10/776,334

Page 3

Art Unit: 1724

the bottom of the cone at its apex opening. An effluent outlet trough is shown at 30.



CHESTERT. BARRY
PRIMARY EXAMINER

571-272-1152